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10/021,200	12/07/2001	Howard Allen Colvin	DN2000251	9470

7590 03/30/2005

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EXAMINER

RAJGURU, UMAKANT K

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/021,200  
Filing Date: December 07, 2001  
Appellant(s): COLVIN ET AL.  
ALVIN T. ROCKHILL ET AL

**MAILED**

**MAR 23 2005**

**GROUP 1700**

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For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed November 22, 2004.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

*u*

A statement identifying the related appeals and interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) Status of Claims**

The statement of the status of the claims contained in the brief is correct.

This appeal involves claims 1, 3-7 and 15.

Claims 2 and 8-14 have been canceled.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

No amendment after final has been filed.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

**(6) Issues**

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

Appellant's brief includes a statement that claims 1, 3-7 and 15 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

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The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

6,075,084	MABRY ET AL	June 2000
6,417,246	JIA ET AL	September 2002

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Rejection of claim 1 under 35 USC 102(a) (set forth in Office action of June 22, 2004 is now withdrawn.

Claims 1, 3-7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mabry et al (US 6,075,084) in view of Jia et al (US 6,417,246).

Mabry describes elastomer composite blends and method. Suitable elastomer latex fluids include both natural and synthetic elastomer lattices and latex blends. Styrene-butadiene rubber is one of the suitable lattices (column 11, line 50 to column 12, line 27). Certain fillers are also used. Fumed silica and precipitated silica are suitable fillers (column 14, lines 6-14). They possess aspect ratio of less than 40 (column 15, lines 47-50).

Mabry fails to suggest the (claimed) dimensions of the silica except that the silica is fumed silica or precipitated silica (column 14, line 9). Mabry mentions in column 15, lines 48-50, that fillers (which includes silica) typically have an aspect ratio of less than 40.

Jia discloses dental composite materials comprising polymers and filler such as colloidal silica (abstract). Silica has largest dimension or diameter of 10-100

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nanometers. A suitable silica is SNOWTEX-PS (column 3, lines 43-45 and line 51).

SNOWTEX is incidentally the same silica, which is used, in instant invention.

It would have been obvious then to use the SNOWTEX silica of Jia in the elastomer blend composite of Mabry to enhance dispersibility and to improve resistance to fracture. Applicants admit that SNOWTEX-PS is already known in the art (see specification, page 10, lines 24-28). Therefore it is reasonable to infer that the silica of Jia satisfies the limitations of silica (of instant claim 1).

**(11) Response to Argument**

On page 4 of the appeal brief, the appellants' argument that "Mabry does not disclose any necessity or preference for using elongated silica" is not persuasive since the examiner has set forth what success or advantage can be expected from using elongated silica. Appellants' assertion that "the use of elongated silica resulted in superior reinforcement was an unexpected discovery" is not agreed with since it is evident from prior art, that there was nothing that was unexpected.

Appellants' arguments about Jia, that "Jia uses polymerizable resins for dental compositions and therefore teachings of Jia are not applicable to rubber compositions" are not persuasive since Jia, though related to not precisely same art as that of Mabry, helps to solve the problem faced by Mabry viz how to enhance reinforcement and which type of silica should <sup>be</sup> ~~be~~ useful. Here it is immaterial whether the resins is polymerizable or not since all resins do polymerize ultimately. If silica of Jia works well with a polymerizable resin it is reasonable to assume that, it should work equally well with rubber, unless proved otherwise.

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Jia in column 5, lines 20-23, does point out that elongated colloidal silica performs much better than the spherical colloidal silica.

Claims 1, 3-7 and 15 are therefore prima facie obvious.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



U.K. Rajguru/dh  
February 15, 2005

Appeal conferees:

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